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The Selection of Antidumping Cases for ITC Determination

Thomas J. Prusa

2.1 Introduction

One of the most remarkable changes in international trade during the past two decades has been the emergence of nontariff barriers (NTBs) as the new form of protectionism (Bhagwati 1988; Page 1987). Voluntary export restraints, orderly marketing arrangements, countervailing duty complaints, and antidumping actions are the most commonly used weapons of the new protectionism. Of specific interest for this paper is the widespread popularity of antidumping actions. While it is generally agreed that countervailing duty and antidumping laws have a legitimate role in maintaining “free and fair” trade, there is growing fear that such laws have been used to unfairly impede trade and harass rival foreign suppliers.

Bhagwati (1988) argues that the design and implementation of antidumping law have encouraged its strategic use. For instance, the Commerce Department’s procedures for calculating dumping margins can lead to positive margins even though the average sales price across countries is the same. Domestic industries are not penalized for filing “frivolous” cases, and therefore are more likely to file with the intent to harass their rivals. Most importantly, since many actions are settled (i.e., involve some type of price or quantity agreement), merely analyzing the incidence of antidumping duties greatly understates the true trade distortion. Messerlin (1988, 1989) and Prusa (1988) have shown that on average withdrawn cases are at least as restrictive as cases that actually result in duties. This is an important result, implying that in practice

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antidumping law is far more protective than is typically measured. As we will discuss further in section 2.2, there are many reasons why a petition could be withdrawn, some of which do not have any implication on the firms' pricing practices. But many others imply that prices for the goods involved will increase.

While economists are beginning to understand the implications of such petition withdrawals (Prusa 1988; Staiger and Wolak 1988, 1991), there has not been a systematic analysis of what determines whether a case will be withdrawn or whether the International Trade Commission (ITC) will make the final decision. The purpose of this paper is to perform such an analysis. Since many (but not all) of the petition withdrawals have involved the steel industry, the simple answer is that cases involving the steel industry are withdrawn but others proceed through to the ITC's injury-determination process. Given that the steel industry has apparently entered a period of "managed" trade, we might expect the settlement issue to fade away. However, a closer look at the data suggests there are certain characteristics that seem to predict quite strongly how a case will ultimately be resolved. Therefore, I believe it is better to think of the steel industry as a special case of a more general phenomenon. The analysis also reveals that the way in which an industry uses antidumping law (i.e., filing patterns, countries involved, etc.) strongly influences the outcome. Since many other industries also feature the same characteristics that apparently lead to settled outcomes, it is likely that we will continue to observe a large number of antidumping cases being withdrawn.

In particular, an antidumping investigation is best thought of as a two-stage decision problem. At the first stage the industry (or the U.S. Trade Representative) decides whether to settle the case. If the case is settled, the ITC never has to make its final injury decision. However, if the case is not settled, the ITC will make its final decision. One advantage of this model is that we can partially capture the dynamics of the first-stage decision problem. In particular, if we find that the characteristics (e.g., high unemployment, low capacity utilization) which influence the ITC's final decision also lead to settlements (suggesting the foreign industry settles because it realizes it will inevitably lose its case), then the welfare implications of such settlements may not be particularly adverse. If on the other hand, we find that political pressure plays the major role in determining whether a case is settled (independent of the injury criteria), then the welfare implications of such agreements are much more unfavorable.

The paper proceeds as follows. Section 2.2 discusses the institutional background of U.S. antidumping law and provides a broad description of its use during the past decade. Section 2.3 discusses the political pressures and economic criteria that may affect how a case is resolved and examines the relationship between political and economic variables and case outcomes. Section 2.4 tests more formally these relationships, using a nested logit model to ana-

lyze the decision problem. Section 2.5 provides concluding comments and discussion.

2.2 Antidumping Law: The Statute and Recent Trends

The purpose of this brief summary of antidumping law is to highlight the relevant aspects for this study. For a more in depth presentation, Jackson and Vermulst (1989) provide an excellent and up-to-date discussion, especially for those concerned with legal issues. Note also that since the Trade Agreement Act of 1979 made significant changes to U.S. antidumping law, this discussion will focus only on actions during the 1980s.

Simply put, “dumping” describes the sale of products for export at a price less than the price for which those products are sold in the home market (the “normal” price). While such a simple definition is adequate for this paper, one should be aware that as applied, the concept of dumping is extremely complicated. For instance, there are adjustments if there are too few home market sales, adjustments if the country is a nonmarket economy, and adjustments if sales are made below cost. For many studies these various complications are important considerations, but for the approach taken in this paper it is convenient if we think of dumping in its simplest terms.

Typically an industry, or some group representing an industry (e.g., a trade association or union), simultaneously files a petition with the Commerce Department’s International Trade Administration (ITA) and with the ITC. In order for duties to be levied against the foreign industry, the ITA must determine that goods have been sold at less than fair value (LTFV) and the ITC must determine that the domestic industry has been or is threatened with material injury by reason of dumped imports. It is noteworthy that each petition is filed against a single country. However, if the domestic industry believes that several countries have sold at LTFV, it will simultaneously file a petition against each country. A multiple petition filing increases the likelihood of an affirmative injury decision because the ITC follows the “cumulation principle” when determining injury. The cumulation principle allows the ITC to consider the total volume of allegedly dumped imports from all involved countries. For example, if the domestic industry files antidumping complaints against three countries, each of which has 5 percent of the U.S. market, the ITC will base its injury determination on the injurious effect of a 15 percent market share, even if the dumping margins differ by large amounts. The more countries involved in the investigation, the greater is the volume of trade, and therefore the greater is the likelihood of an affirmative injury determination. Since 1980, approximately 70 percent of antidumping petitions have been part of a multiple petition filing.

Once the petition has been filed, the ITA and ITC each make a series of decisions. Within 45 days the ITC makes a preliminary injury decision. If this

decision is negative, the case is terminated. Review of ITC cases suggests that the material injury standard is lower at the preliminary stage than at the final decision, and therefore cases terminated at the preliminary injury stage do not appear to have merit (see Moore 1988 for statistical evidence). The purpose of the preliminary determination is to filter out these “frivolous” petitions. If the ITC’s preliminary decision is affirmative, the ITA makes a preliminary LTFV decision within 160 days and then a final LTFV decision within 75 days of its preliminary decision. A final LTFV determination is made regardless of the preliminary decision (i.e., the ITA’s preliminary decision does not terminate the investigation). The chief purpose of the preliminary LTFV decision is to set a temporary bond rate that is in effect until the case is officially resolved. The bond grants the domestic industry temporary protection for the course of the investigation. If the foreign industry is found to have dumped, it forfeits the bond. If the ITA’s final decision is affirmative, the ITC must make its final injury decision no longer than 75 days after the ITA’s final determination. If the ITC’s final decision is affirmative, duties are collected for a period of no less than two years. If the ITC’s final decision is negative, the case is terminated and any bond paid during the course of the investigation is refunded.

At any time during the investigation, the party that filed the petition can withdraw its petition. There are several reasons why this may happen. First, a disadvantageous decision or a piece of unfortunate evidence might be revealed which leads the party to withdraw its petition. For instance, the ITA may decide to calculate dumping margins using a different set of adjustment procedures than was proposed in the petition. Rather than proceed with a hopeless petition, the petition may be withdrawn. Second, the U.S. government may arrange a quantity or price agreement with the foreign government/industry that eliminates the injury. Once an agreement is achieved, the U.S. government pressures the domestic industry to withdraw its petition. The 1982 and 1984 steel arrangements are examples of this type of withdrawal. Third, the case can be suspended if the foreign industry agrees to eliminate LTFV sales to the U.S. market. The 1985 semiconductor agreement is an example of this type of withdrawal. Fourth, the party may withdraw its petition on its own accord, without any clear reason why it is doing so. It is possible that such withdrawals are based on some type of private agreement between the foreign and domestic parties. Prusa (1988) argues that such agreements are provided antitrust immunity by the *Noerr-Pennington* Doctrine.

As this discussion indicates, there are a number of ways a settlement can be reached, and one should not infer that a withdrawal is an indication of an unsuccessful petition. In fact, a review of the cases confirms that at least 80–90 percent of withdrawn cases involve some type of agreement. Unfortunately, given the way the U.S. government reports antidumping outcomes, it is sometimes impossible to know with certainty whether or not a withdrawal involves a settlement. To keep the analysis as simple as possible, we will treat all withdrawn cases as if they involved some type of settlement agreement,

and hence we use the terms interchangeably. Further, the analysis in the following sections only depends on the assumption that petition withdrawals maximize firm profits.

A look at recent trends in antidumping actions reveals that a surprisingly large number of cases (25 percent) are withdrawn. Table 2.1 presents a summary of antidumping actions by product description and year for the 1980–88 period. The broadly defined metals and metal products (MMP) industry has clearly been the heaviest user of antidumping law during the 1980s, accounting for nearly two-thirds of the 395 cases. Despite its heavy use of the law, the MMP industry has only had moderate success in (officially) winning its cases, obtaining duties in approximately one-third of its cases. However, this is a bit deceptive since the MMP industry has accounted for over 90 percent of the withdrawn cases, obtaining some type of relief in about ninety additional cases. All in all, no other industry has had as much success with antidumping law as the MMP industry. The chemicals industry is the second largest user of antidumping law, while the agricultural products industry is third. However, neither of these industries display the same propensity for settlements as the MMP industry.

Table 2.2 breaks down cases by year. It is somewhat surprising that during the entire time period only twenty-four cases were terminated by a negative LTFV determination. This is consistent with the belief that the rules governing the ITA's calculation procedures are biased against foreign producers. In contrast, showing material injury has proven to be more difficult. The ITC has rejected sixty-five cases at the preliminary stage, despite the fact that (i) the foreign industry's has extremely limited time for defense preparation and (ii) that the preliminary injury standard is less exacting than the final injury standard. This suggests that many frivolous cases are indeed filed. The ITC has also terminated an additional fifty-six cases at the final injury determination. Although there have been petition withdrawals nearly every year, approximately 60 percent occurred in either 1982 or 1984, the years of the steel arrangements.

Table 2.3 provides a regional tabulation of cases. All told, more than fifty countries have been charged with dumping, with seven countries accounting for nearly 50 percent of the cases.¹ Japan has been the country most often alleged to have dumped, although the EC (as a region) has been involved in far more cases. The incidence of duties levied is probably the most striking difference between Japan and the EC: more than 50 percent of cases against Japanese firms have resulted in duties, while the corresponding rate for EC firms is only 18 percent. However, when one adjusts for the number of cases withdrawn, the incidence of successful cases against the EC and Japan is not terribly different. The fact that Japan is less inclined to settle antidumping

1. Japan, West Germany, Taiwan, Italy, Canada, Brazil, and South Korea are the countries most often involved (in descending order).

Table 2.1 Antidumping Case Summary, 1980–1988, by TSUSA Code

TSUSA Code and Product Description	Dumping Order	No Injury (Preliminary)	No Injury (Final)	No LTFV Sales	Withdrawal/ Agreement	Petition Dismissed	Total
100 Animal and vegetable products	12	6	3	3	0	1	25
200 Wood and paper, printed matter	2	1	1	1	0	0	5
300 Textile fibers and textile products	6	4	2	1	2	0	15
400 Chemicals	23	10	6	6	5	0	50
500 Nonmetallic metals	0	11	11	0	0	0	22
600 Metals and metal products	87	33	25	8	100	6	259
601–629 Metals	47	22	16	2	85	6	178
630–659 Metal products	17	4	3	2	7	0	33
660–679 Machinery	4	0	1	2	1	0	8
680–689 Electric machinery	17	3	4	1	5	0	30
690–699 Transportation equipment	2	4	1	1	2	0	10
700 Miscellaneous products	5	0	8	5	1	0	19
No. of cases	135	65	56	24	108	7	395

Note: See appendix for data sources. Excludes 16 cases that have not been resolved.

Table 2.2 Antidumping Case Summary, 1980–1988, by Year Initiated

Year	Dumping Order	No Injury (Preliminary)	No Injury (Final)	No LTVF Sales	Withdrawal/ Agreement	Petition Dismissed	Total
1978	1	0	0	0	0	0	1
1979	4	0	3	1	0	0	8
1980	4	13	1	1	10	0	29
1981	5	2	1	1	4	2	15
1982	13	18	5	3	23	3	65
1983	19	7	10	5	3	2	46
1984	8	2	10	6	44	0	70
1985	27	12	7	2	15	0	63
1986	44	8	9	3	7	0	71
1987	8	2	3	0	2	0	15
1988	2	1	7	2	0	0	12
No. of cases	135	65	56	24	108	7	395

Note: See appendix for data sources. Excludes 16 cases that have not been resolved. Nine of the antidumping cases initiated during 1978 and 1979 were not resolved until after the 1979 Trade Agreement Act took effect.

cases in a politically agreeable fashion is somewhat surprising, given its propensity for managed trade agreements; in addition, the heightened publicity surrounding official ITC decisions probably contributes to the feelings that Japan competes unfairly.

2.3 Political Pressure vs. Economic Criteria

The overview presented in the previous section showed that antidumping law has been used by a wide variety of industries and against a large number of countries. It also revealed that a striking number of cases are withdrawn. Figure 2.1 depicts the hypothesized decision process. At the first stage the domestic complainant and foreign respondent decide whether to settle. If the case is not settled/withdrawn, the ITC will proceed with its determination. For simplicity we will assume that frivolous cases have been eliminated at the ITC's preliminary determination and that the ITA has found dumping. Given the data presented in section 2.2, these are reasonable assumptions.

What factors influence whether a case is withdrawn? This paper will explore two hypotheses: self-selection and political pressure. The self-selection hypothesis argues that cases are settled to avoid the inevitable ITC outcome. Specifically, if the domestic industry files its antidumping petition (and the foreign industry defends itself) in order to increase profits, the petition will be withdrawn only if the profits from withdrawing are greater than the expected profits from an official ITC decision. Letting Π_w (Π_w^*) denote the domestic (foreign) industry's profits from withdrawing, Π_D (Π_D^*) denote the domestic (foreign) industry's profits if the ITC levies duties, Π_N (Π_N^*) denote the domestic (foreign) industry's profits if the ITC rejects the petition, and C (C^*) denote

Table 2.3 Antidumping Case Summary, 1980–1988, by Region

Region/Country	Dumping Order	No Injury (Preliminary)	No Injury (Final)	No LTFV Sales	Withdrawal/ Agreement	Petition Dismissed	Total
European Community	23	36	13	6	43	5	126
NICs	26	5	12	6	5	0	54
Latin America	19	6	7	4	16	1	53
Japan	25	6	8	2	8	0	49
Nonmarket economies	18	1	4	3	21	1	48
Canada	9	6	5	0	2	0	22
Other Europe	4	4	3	1	6	0	18
Asia	4	0	0	1	0	0	5
Other	7	1	4	1	7	0	20
No. of cases	135	65	56	24	108	7	395

Note: See table 2.1.

the domestic (foreign) industry's *additional* legal expenses if the case proceeds through the injury decision, the petition will be withdrawn if

$$(1) \quad \begin{aligned} \Pi_w &\geq \rho\Pi_D + (1 - \rho)\Pi_N - C, \\ \Pi_w &\geq \rho^*\Pi_D^* + (1 - \rho^*)\Pi_N^* - C^*, \end{aligned}$$

where ρ (ρ^*) denotes the domestic (foreign) industry's subjective probability of an affirmative injury decision. Clearly, $\Pi_D > \Pi_N$ and $\Pi_D^* > \Pi_N^*$. That is, the domestic industry benefits and the foreign firm loses when duties are levied. Further, we will assume $\Pi_D \geq \Pi_w \geq \Pi_N$ and $\Pi_D^* \leq \Pi_w^* \leq \Pi_N^*$. That is, the payoff or value of a withdrawn case falls somewhere between the payoffs under the other two alternatives.²

As the ITC's investigation proceeds, both parties will estimate ρ (ρ^*). The ITC typically cites changes in capacity utilization, employment, and import market share, etc., in its reports, and thus these variables will be used to estimate ρ (ρ^*). If the economic criteria indicate injury, then the parties will attempt to reach some agreement (i.e., ρ and ρ^* close to 1). Under these circumstances, withdrawn cases are self-selected based on their likely outcome. If self-selection describes the withdrawal process, then settlements have roughly the same welfare consequences (for consumers) as duties. In particular, domestic consumers will pay higher prices for the foreign goods because there has been a violation of fair trade principles.

In contrast, under the political pressure hypothesis, cases are withdrawn not

2. Prusa (1988) has shown that this ranking of payoffs need not always hold. For the present analysis, however, it is convenient to assume that the domestic industry's payoff from withdrawal is less than the payoff when duties are levied.

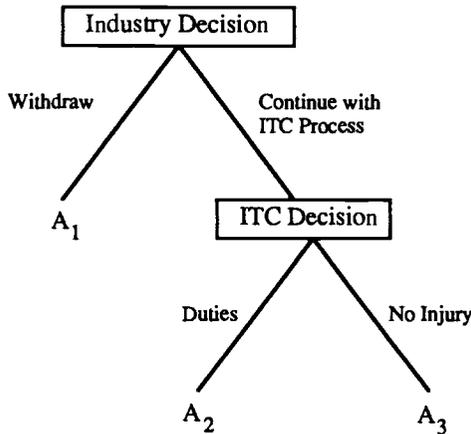


Fig. 2.1 Estimated decision tree

because the inevitability of the outcome but rather because it is in the political interest of the United States to arrange a negotiated settlement. An antidumping action might become a political issue if the filing involves multiple countries. The *threat* of duties being levied against a large number of countries elevates the issue into a major international dispute. In 1984, for instance, in response to the wave of antidumping petitions filed against EC steel producers, the EC threatened retaliation against paper, beef, and fertilizers (Howell et al. 1988). Obviously neither the United States nor the EC wanted a trade war, so they negotiated a settlement. In other words, the way in which an industry files its petitions can increase its chances for “negotiated” protection. Under this political pressure hypothesis, equation (1) need not be satisfied for a settlement agreement to be achieved. For example, suppose both parties know that it is very likely the case will be rejected if it proceeds through the ITC’s final decision (i.e., $\rho = \rho^* \approx 0$). The domestic firm will agree to virtually any settlement since $\Pi_w \geq \Pi_N - C$; however, the foreign firm will only commit to a price undertaking if $\Pi_w^* \geq \Pi_N^* - C^*$. If C^* is small, the foreign firm will not be willing to offer a price undertaking (since $\Pi_w^* \leq \Pi_N^*$) and thus it is not likely that case will be settled.³

However, under the political pressure hypothesis, the foreign industry may be forced (by its own government) to offer a price undertaking even if it has not injured the domestic industry. By filing multiple petitions the domestic industry can force the U.S. and foreign governments to deal with a sectoral

3. If $\rho = 0$, the domestic industry may prefer to withdraw its petition (without any undertaking) to avoid spending C .

problem in the broader context of overall U.S. foreign relations; the mere investigation and threat of duties threatens trade relations and can lead to the imposition of a price/quota agreement even when it is unlikely that duties will be levied.⁴

The theory of “congressional dominance” provides another justification for the political pressure hypothesis (Weingast 1981; 1984; Weingast and Moran 1983). Under this theory Congress controls agency decisions via oversight committees and budget decisions. Members of Congress favor agencies who “serve their constituencies” and penalize those who do not. Baldwin (1985) argues that the structure of the ITC insulates the commissioners from undue congressional pressure;⁵ however, Moore (1988) argues that because Congress has complete control (no OMB oversight) over the ITC’s budget, Baldwin underestimates Congress’s leverage.

Using different methodology and data sets, Moore (1988) and Hansen (1990) have both found that oversight committees exert significant influence on ITC decisions. One advantage of Moore’s approach is that he uses data reported in the official ITC reports. However, this also severely limits the type and quantity of data he can use, since only cases with ITC injury determinations enter his analysis. In addition, confidentiality prevents data from being published for those cases involving a small number of firms. Because much of the data he uses is unavailable for many cases, his data set coverage is much more limited than mine. Moreover, since the cases that do not enter Moore’s analysis all have a similar industry structure, his results must be carefully interpreted. Hansen takes a different approach, estimating the ITC’s decision function for antidumping, countervailing duty, and escape clause cases for the 1975–84 period. Her data set is much broader than mine, but since the injury criteria for an escape clause determination is quite different from antidumping and countervailing duty determinations, her injury estimation does not have a natural interpretation. Furthermore, and most relevant for this analysis, neither Hansen nor Moore consider the (firm’s) first-stage decision in their analysis, and therefore they ignore a sizable number of cases. The chief advantage of the approach taken in this paper is that by also measuring the influence exerted at the withdrawal stage, it permits a more precise characterization of the (potential) political pressure. For instance, congressional oversight committees could influence the likelihood of a settled case by (i) pressuring the U.S. Trade Representative (USTR) to negotiate a settlement and/or (ii) by raising the likelihood of an affirmative decision via pressure of the ITC. Further, there are a couple reasons why Congress would prefer protection granted

4. Howell et al. (1988) argue that steel quotas have been agreed to when it appeared that there would be a “no injury” finding.

5. Commissioners cannot be reappointed, they are nominated by the executive branch but approved by the legislative branch, and no more than three commissioners can be from the same party.

via petition withdraws rather than via ITC decisions. First, if members of Congress are risk averse, they would prefer the certainty of a settled outcome to the uncertain ITC outcome. Second, settled cases do not enter the official measures of protectionism. Thus, in the context of trade negotiations, Congress may prefer protection granted via unofficial settlements since it provides a veil for trade restrictions.

Before proceeding to the formal econometric test, one can gain quite a bit of insight into the data by simply examining simple cross-tabulation relationships among variables. For instance, to examine political pressure, I partitioned the data set into those cases with and without production facilities in states (districts) which had a representative on the Senate International trade Subcommittee or House Trade Subcommittee (table 2.4), the subcommittees that have direct oversight responsibilities for the ITC. Note that in this table (and all of the following) I focus only on those cases that were withdrawn or were subject to a final ITC decision. Also due to data limitations I was forced to drop eighteen cases, most of which involved agricultural products. A more detailed discussion of the methods used to construct the data series used in this paper can be found in the appendix.

If the null hypothesis is that these subcommittees influence decisions, then we would expect industries with oversight representation to gain protection more often than those industries without representation. Looking first at the top panel (Senate), it is clear that congressional representation has a strong affect on the withdrawal decision. Of the 106 withdrawals, 104 were represented by at least two senators, while 99 were represented by at least five senators. Virtually the identical pattern is found when we look at the House oversight subcommittee. Since withdrawals typically involve some type of protection, these numbers suggest that industries with strong oversight representation are more likely to be protected. However, in contrast with the Moore (1988) and Hansen (1990) studies, this table suggests the oversight committees do not exert undue influence on the ITC's injury decision. Overall, of the 175 cases that proceeded to the ITC, 126 (72 percent) resulted in duties. When we control for congressional representation, we find rather surprisingly that cases *without* congressional representation have a higher probability of obtaining protection than those with representation. Although the differences in conditional probabilities are not as dramatic as those for the first stage, they do suggest that if Congress does influence antidumping outcomes, the major effect is on the settlement process.

The data in table 2.1 revealed that the majority of withdrawn cases involved metal products and thus it is natural to explore this relationship further. In table 2.5, I partition the cases by whether they involve steel products and find (as expected) most of the withdrawn cases (87 percent) involve steel; however, the second-stage decision appears to be independent of whether the steel industry is involved. This is a bit surprising since a number of steel analysts

Table 2.4 Congressional Oversight

	Petition Withdrawn/ Agreement	Dumping Order	No Injury (Final)	Total
Senate International Trade Subcommittee				
Senators with production facilities in their state:				
Cases with < 2 members	2	17 (81%)	4 (19%)	23
Cases with \geq 2 members	104	109 (71%)	45 (29%)	258
Cases with < 5 members	7	62 (77%)	19 (23%)	88
Cases with \geq 5 members	99	64 (68%)	30 (32%)	193
Overall	106	126 (72%)	49 (28%)	281
House of Representatives Trade Subcommittee				
Members of Congress with production facilities in their state:				
Cases with < 2 members	5	27 (75%)	9 (25%)	41
Cases with \geq 2 members	101	99 (71%)	40 (29%)	240
Cases with < 4 members	10	53 (67%)	26 (33%)	89
Cases with \geq 4 members	96	73 (76%)	23 (24%)	192
Overall	106	126 (72%)	49 (28%)	281

Note: Numbers in parentheses are conditional probabilities (i.e., probability of affirmative [negative] ITC decision, given that case proceeds to final decision). See appendix for data sources.

Table 2.5 Steel Industry Effect

	Petition Withdrawn/ Agreement	Dumping Order	No Injury (Final)	Total
Cases not involving steel products	14	59 (69%)	26 (31%)	99
Cases involving steel products	92	67 (74%)	23 (26%)	182
Overall	106	126 (72%)	49 (28%)	281

Note: See table 2.4

have argued quite strongly that foreign dumping has greatly injured the U.S. steel industry.⁶ However, if cases are being withdrawn because of self-selection, we would expect this result. For instance, if it was known that the steel industry received preferential treatment from the ITC, rational parties would take this into account when forming their expectations of ρ (ρ^*). Since the withdrawal decision will adjust for the industry-specific preferential treatment at the ITC, the steel cases that proceed to the ITC will have the same chance of obtaining protection as nonsteel cases, even though on their objective merits, steel cases could be weaker than nonsteel cases. Therefore, the

6. See Howell et al. (1988) for numerous references.

Table 2.6 Number of Countries Involved in Filing

	Petition Withdrawn/			Total
	Agreement	Dumping Order	No Injury (Final)	
Filings with 1 Country	15	51 (74%)	18 (26%)	84
Filings with > 1 Country	91	75 (71%)	31 (29%)	197
Filings with \geq 2 Countries	22	75 (74%)	26 (26%)	123
Filings with > 2 Countries	84	51 (69%)	23 (31%)	158
Filings with \leq 4 Countries	43	112 (76%)	35 (24%)	190
Filings with > 4 Countries	63	14 (50%)	14 (50%)	91
Overall	106	126 (72%)	49 (28%)	281

Note: See table 2.4.

independence of the second-stage decision from known variables (may) merely reflect that agents are acting optimally at the first stage.⁷

It was argued above that the practice of filing multiple petitions has become quite standard. Filing multiple petitions raises the international visibility of the dumping allegations, increasing the likelihood of a settlement. Table 2.6 verifies this. Over 80 percent of the withdrawn cases involved at least three countries. It is also argued that filing multiple petitions increases the probability of injury via the "cumulation principle." However, the conditional probability of an affirmative ITC decision does not appear to be affected by the number of countries involved. This suggests either that cumulation is not as "protective" as originally thought or that cumulation affects the outcome via the self-selection process.

We also expect that the economic criteria that the ITC uses to determine injury to influence both the first- and second-stage decisions. Tables 2.7 and 2.8 present data on employment, capacity utilization, and concentration ratios; a review of ITC case reports suggests that these variables play an important role in ITC decisions. A dramatic fall in employment or capacity utilization may reflect injury.⁸ The concentration ratio serves as a proxy for the appropriability of the benefits of protection. Industries with high concentration ratios will not suffer from the free-rider problem that might plague more competitive industries and thus might be able to more effectively lobby for protection. Note, however, that other criteria such as import market share, exports, and inventory are also sometimes cited as important factors; unfortunately the unavailability of data prevented these variables from being used in this study. More will be said on this subject in section 2.5.

7. Priest and Klein (1984) formally develop this selection argument for litigation cases.

8. The ITC actually determines injury after controlling for changes due to cyclical changes in the overall economy. Therefore, one would actually like to examine the relationship between the changes in employment and capacity utilization after purging these variables of cyclical components. If the time series existed as monthly data then one could regress capacity utilization on GNP to remove the cyclical component. Because I only have annual data, I do not detrend the variables.

Table 2.7 Economic Criteria—Distributions

	Petition Withdrawn/ Agreement	Dumping Order	No Injury (Final)	Overall
	Mean			
Capacity Utilization (year t_0)	59.5	66.7	66.4	64.5
% Δ capacity utilization (between year t_0 and t_{-1})	-11.0%	2.0%	2.4%	-2.9%
% Δ capacity utilization (between year t_{-1} and t_{-2})	16.0%	-0.9%	5.8%	4.4%
Employment (thousands)	234.5	108.3	115.2	148.4
% Δ employment (between year t_0 and t_{-1})	-8.1%	-5.6%	-4.0%	-6.4%
% Δ employment (between year t_{-1} and t_{-2})	-7.1%	-4.0%	-5.4%	-5.2%
Final ITA Duty Margin	...	28.98%	30.32%	...
	Median			
Capacity Utilization (year t_0)	59	66	66	66
% Δ capacity utilization (between year t_0 and t_{-1})	-10.6%	-2.6%	0%	-5.6%
% Δ capacity utilization (between year t_{-1} and t_{-2})	0%	-3.6%	0%	-3.6%
Employment (thousands)	247.3	73.3	43.7	90.6
% Δ employment (between year t_0 and t_{-1})	-2.6%	-5.2%	-2.6%	-4.3%
% Δ employment (between year t_{-1} and t_{-2})	-3.3%	-3.1%	-1.2%	-3.1%
Final ITA Duty Margin	...	14.71%	17.58%	...

Table 2.7 presents the mean and median of these criteria, conditional on outcome. A number of insights emerge from this table. First, withdrawn cases have the lowest capacity utilization; however, if the case proceeds to the ITC, capacity utilization does not appear to be an important predictor of the final outcome. This pattern is consistent with the self-selection hypothesis. Withdrawn cases have also had the greatest fall in capacity utilization (during the year prior to the petition), which also suggests that cases are being self-selected on the basis of injury criteria. Second, withdrawn cases tend to be from “large” industries, having employment about twice as great as those cases that proceed to the ITC. This is consistent with the adding-machine model of Caves (1976) and suggests that industries with many employees are more effective lobbyists. However, employment does not appear to have any significant affect on the ITC’s decision, which is consistent with Baldwin’s conjecture that the ITC is insulated from lobbying pressure. It is also consistent with the argument that any measurable employment effects are eliminated

Table 2.8 Economic Criteria Influence

Cases with	Petition Withdrawn/ Agreement	Dumping Order	No Injury (Final)	Total
Capacity utilization < 66	33	84 (74%)	29 (26%)	146
Capacity utilization ≥ 66	73	42 (68%)	20 (32%)	135
Employment < 137	18	91 (75%)	31 (25%)	140
Employment ≥ 137	88	35 (66%)	18 (34%)	141
Concentration < 42	17	79 (77%)	24 (23%)	120
Concentration ≥ 42	89	47 (65%)	25 (35%)	161
Overall	106	126 (72%)	49 (28%)	281

Note: Numbers in parentheses are conditional probabilities (i.e., probability of affirmative [negative] ITC decision, given that case proceeds to final decision). See appendix for data sources. The partitioning cutoffs are the distribution medians. Employment is in thousands.

via self-selection. Withdrawn cases also have had the greatest fall in employment (during the year prior to the petition). Finally, the results in Table 2.7 suggest that the ITC ignores the dumping margin when determining injury since average duties are higher for “no injury” decisions than for injury decisions.

Table 2.8 partitions the data set into those cases that fall above and below the median value of capacity utilization, employment, and concentration ratio. The capacity utilization results continue to be quite consistent with the self-selection hypothesis. The employment and concentration results suggest that large concentrated industries are more able to negotiate a withdrawal than small competitive industries. However, as has been the case for all the other “predictors,” none of these variables appear to be a significant predictor of the ITC’s final decision.

2.4 Estimating the Decision Tree

The hypothesized two-stage decision problem lends itself naturally to nested-logit analysis. In the first stage the industry (or USTR) makes a binary decision whether to settle/withdraw (choice A_1), taking into account the expected ITC decision. In the second stage the ITC makes a binary choice whether the domestic industry has been injured (choice A_2) or not (choice A_3), conditional on the case not having been withdrawn. Since the econometric theory is well established my presentation of the model will be brief. McFadden (1978) and Hausman and McFadden (1984) are the seminal presentations of the theory; my presentation most closely follows that of Maddala (1983).

At the first stage, we will assume that the i th case’s withdrawal decision is given by

$$(2) \quad y_i^* = X_i\beta + \mu_{1i},$$

where y_i^* is a latent continuous measure of the likelihood that the petition is withdrawn. However, we do not observe y_i^* but rather an indicator function y_i defined by

$$(3) \quad y_i = \begin{cases} 1, & \text{if } y_i^* > 0, \\ 0, & \text{otherwise.} \end{cases}$$

Equations (2) and (3) imply that the probability of observing choice A_1 can be written as

$$(4) \quad \begin{aligned} P(y_i = 1) &= P(y_i^* > 0 \mid X_i) \\ &= P(\mu_{1i} > -X_i\beta) \\ &= 1 - F(-X_i\beta), \end{aligned}$$

where $F(\cdot)$ is the cumulative distribution function of μ_{1i} .

Similarly, at the second stage, we will assume the i th case's final decision is given by

$$(5) \quad v_i^* = Z_i\gamma + \mu_{2i},$$

where v_i^* is a latent continuous measure of the likelihood that duties are levied. Once again, we do not observe v_i^* but rather an indicator function v_i defined by

$$(6) \quad v_i = \begin{cases} 1, & \text{if } v_i^* > 0, \\ 0, & \text{otherwise.} \end{cases}$$

Equations (5) and (6) imply that the probability of observing choice A_2 can be written as

$$(7) \quad \begin{aligned} P(v_i = 1) &= P(v_i^* > 0 \mid Z_i) \\ &= P(\mu_{2i} > -Z_i\gamma) \\ &= 1 - G(-Z_i\gamma), \end{aligned}$$

where $G(\cdot)$ is the cumulative distribution function of μ_{2i} .

X is a vector of exogenous variables that determine the withdrawal decision while Z is a vector of exogenous variables that determine the final decision. The μ_{1i} and μ_{2i} are residuals that capture unmeasured variables, case idiosyncrasies, etc. In this case, the observed values of y_i and v_i are just realizations of a binomial process given by equations (4) and (7), varying from case to case (i.e., depending on X_i and Z_i). If we assume that μ_{1i} and μ_{2i} are independently distributed we can write the likelihood function as

$$(8) \quad L = \prod_{y_i=1} [1 - F(-X_i\beta)] \prod_{y_i=0} F(-X_i\beta) \times \left[\prod_{v_i=1} [1 - G(-Z_i\gamma)] \prod_{v_i=0} G(-Z_i\gamma) \right].$$

The functional forms for $F(\cdot)$ and $G(\cdot)$ in equation (8) will depend on the assumptions made about μ_{1i} and μ_{2i} in equations (2) and (5), respectively. Assuming that μ_{1i} and μ_{2i} are i.i.d. with the generalized extreme-value distribution allows us to write the discrete choice probabilities as⁹

$$\begin{aligned} P(A_1 | Z, X; \beta, \gamma) &= p_1 = \frac{e^{X\beta}}{e^{X\beta} + e^{Z\gamma} + 1}, \\ P(A_2 | Z, X; \beta, \gamma) &= p_2 = (1 - p_1) \frac{e^{Z\gamma}}{e^{Z\gamma} + 1}, \\ P(A_3 | Z, X; \beta, \gamma) &= p_3 = (1 - p_1) \frac{1}{e^{Z\gamma} + 1}. \end{aligned}$$

Given these probabilities, the log likelihood can be written as

$$(9) \quad LOGL(\beta, \gamma) = \sum_{n=1}^N \sum_{j=1}^3 D_{jn} \log P(A_j | Z, X; \beta, \gamma),$$

where $D_{jn} = 1$ if the n th case is resolved via outcome A_j and zero otherwise.

In many applications the choice of X and Z is restricted by economic theory. In the current application model specification is more open-ended. For this paper we will use the economic and political pressure variables discussed in section 2.3. Further discussion of this issue is found in section 2.5.

Given our model, the first-stage decision will be influenced by the expectation of the second-stage decision and possibly more directly by other political and economic factors. To distinguish whether a variable affects the withdrawal decision directly or indirectly via its affect on the injury decision, I will first present a variety of specifications of the withdrawal decision without altering the second-stage specification. Then, after the withdrawal decision has been adequately characterized, I will present a variety of specifications of the injury decision without altering the first-stage specification. Thus, in a sense the econometric analysis proceeds in two steps, since we first analyze the determinants of the withdrawal decision and then analyze the determinants of the injury decision. It is important to stress that each model specification involves reestimating the entire decision tree (i.e., both stages). Table 2.9 presents a variety of specifications that help clarify the decision process. The first set of regressions (models 1–6) concentrates on the first-stage decision, while the second set of regressions (models 7–11) focuses on the second-stage decision.

The analysis of the first-stage withdrawal decision reveals that the level of employment and the number of countries involved in the filing are the key characteristics of a case that predict whether a petition will be withdrawn.

9. In McFadden's (1978) original formulation of the nested-logit model, he estimates an inclusive value that weights the second-stage decision. In this application, since the Z vector is chooser-specific, the inclusive value is not identified. In this case, the nested logit is equivalent to a conditional logit model.

Table 2.9 **Nested Logit Estimates**

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
First stage:						
Constant	-0.696 (-2.195)	-1.702 (-4.534)	-1.763 (-4.622)	-1.401 (-1.774)	-2.136 (-2.838)	-1.710 (-4.395)
Steel dummy (= 1 if steel)	1.005 (2.342)		0.180 (0.383)			
No. countries in Filing (= 1 if >2)	1.104 (2.851)	1.333 (3.930)	1.281 (3.126)	1.387 (4.315)	1.336 (3.926)	1.240 (3.277)
Employment		0.009 (6.317)	0.009 (5.670)		0.009 (6.000)	0.009 (5.448)
Senate oversight (= 1 if ≥2)				1.338 (1.712)	0.482 (0.638)	
%Δ capacity util. (t_0 and t_{-1})						-2.879 (-1.929)
%Δ capacity util. (t_{-1} and t_{-2})						0.301 (0.262)
%Δ employment (t_0 and t_{-1})						-0.378 (-0.111)
%Δ employment (t_{-1} and t_{-2})						-0.237 (-0.088)
Second stage:						
Constant	0.825 (3.425)	0.744 (3.058)	0.731 (3.006)	0.904 (3.755)	0.739 (3.026)	0.714 (2.756)
%Δ capacity util. (t_0 and t_{-1})	2.037 (2.349)	1.466 (1.673)	1.482 (1.682)	1.884 (2.127)	1.456 (1.635)	-0.135 (-0.126)
%Δ capacity util. (t_{-1} and t_{-2})	-1.458 (-1.679)	-1.763 (-1.952)	-1.726 (-1.857)	-1.578 (-1.866)	-1.715 (-1.888)	-1.587 (-1.634)

%Δ employment (t_0 and t_{-1})	-0.241 (-0.138)	-1.778 (-0.997)	-1.904 (-1.059)	0.683 (0.399)	-1.759 (-0.985)	-2.031 (-0.946)
%Δ employment (t_{-1} and t_{-2})	4.366 (2.219)	3.734 (1.825)	3.626 (1.726)	4.892 (2.535)	3.662 (1.769)	3.480 (1.318)
Final ITA duty margin	0.019 (4.093)	0.016 (3.258)	0.015 (3.224)	0.021 (4.343)	0.016 (3.253)	0.015 (3.009)
Log likelihood	-243.257	-224.034	-223.941	-245.162	-223.849	-220.195
% correct predictions						
First stage	80.43%	85.41%	85.41%	78.65%	85.41%	82.21%
Second stage	72.57%	73.14%	73.14%	73.14%	73.14%	73.71%
		Model 7	Model 8	Model 9	Model 10	Model 11
First stage:						
Constant		-1.683 (-4.397)	-1.608 (-4.040)	-1.740 (-4.493)	-1.677 (-4.372)	-1.683 (-4.122)
No. countries in filing (= 1 if >2)		1.263 (3.643)	1.081 (2.672)	1.341 (3.692)	1.263 (3.637)	1.282 (3.671)
Employment		0.009 (5.993)	0.009 (6.041)	0.009 (6.137)	0.009 (5.897)	0.009 (4.660)
%Δ capacity util. (t_0 and t_{-1})		-3.021 (-2.474)	-3.152 (-2.582)	-3.059 (-2.464)	-3.008 (-2.435)	-2.995 (-2.441)
Second stage:						
Constant		0.737 (2.980)	0.845 (2.979)	0.558 (1.916)	1.001 (1.947)	0.215 (0.174)
%Δ capacity util. (t_0 and t_{-1})		-0.204 (-0.206)	-0.260 (-0.260)	-0.336 (-0.332)	-0.214 (-0.217)	-0.540 (-0.485)
%Δ capacity util. (t_{-1} and t_{-2})		-1.740 (-1.920)	-1.637 (-1.760)	-2.018 (-2.240)	-1.699 (-1.863)	-1.831 (-1.957)

(continued)

Table 2.9 **Nested Logit Estimates** (*continued*)

	Model 7	Model 8	Model 9	Model 10	Model 11
%Δ employment (t_0 and t_{-1})	-2.014 (-1.111)	-2.462 (-1.329)	-1.139 (-0.632)	-1.967 (-1.082)	-2.753 (-1.301)
%Δ employment (t_{-1} and t_{-2})	3.654 (1.799)	3.817 (1.883)	4.136 (2.000)	3.542 (1.743)	2.808 (1.303)
Final ITA duty margin	0.015 (3.093)	0.015 (3.130)	0.016 (3.237)	0.015 (3.037)	0.015 (3.020)
No. countries in filing (= 1 if >2)		-0.291 (-0.830)			
Steel dummy (= 1 if steel)			0.434 (1.296)		
Senate oversight dummy (= 1 if ≥2)				-0.294 (-0.557)	
Employment					0.000 (0.250)
Concentration ratio					-0.011 (-1.090)
Capacity utilization					0.012 (0.682)
Log likelihood	-220.256	-219.945	-219.404	-220.095	-219.617
% correct predictions					
First stage	82.21%	82.21%	82.21%	82.21%	82.21%
Second stage	73.71%	73.71%	73.71%	74.29%	73.71%

Note: *t*-statistics in parentheses. First-stage estimates Pr(Withdrawal); second-stage estimates Pr(Duties | No Withdrawal).

When regressed without employment, the steel industry dummy and senate oversight dummy are positive and significant (see model 1 and model 4, respectively).¹⁰ A positive coefficient implies that the steel industry and senate oversight dummies increase the likelihood of a withdrawal. However, when employment is added to the specification both variables lose their significance, being dominated by the employment effect (models 3 and 5, respectively). Moreover, when employment is regressed without either the steel or oversight dummies, the results are virtually the same as the specifications with the dummies included (model 2). This may reflect collinearity between employment and the steel dummy, but it also suggests that although the steel industry has accounted for most of the withdrawals, the more general attribute that influences the withdrawal decision is an industry's size. Also, in all specifications the number of countries involved has a positive and significant influence on the withdrawal decision, which suggests that the "multiple petition" strategy can significantly increase the likelihood the industry will receive some type of protection (in the form of some price/quantity agreement). I interpret this as implying that the tension created by a multiple petition filing pressures the countries into arranging a settlement. Finally, in model 6 the economic criteria (which are known to the parties at the first stage) are tested for their influence on the withdrawal decision. The only significant variable is the percentage change in capacity utilization during the year immediately prior to the petition filing. The estimated coefficient implies that a fall in capacity utilization increases the chances of the petition being withdrawn. The coefficient on this variable at the second stage, although insignificant, is also negative, providing only weak evidence that cases are withdrawn because of self-selection.¹¹

The second set of regressions (models 7–11) concentrate on the second stage decision, controlling for the first stage decision using the number of countries dummy, employment, and percentage change in capacity utilization during the prior year. The analysis of the second-stage decision reveals that (1) the economic criteria do relatively poorly predicting the decision, (2) the Senate oversight effect is not significant, and (3) the ITA's final duty margin is an important predictor of the injury decision.

Consider first the set of economic criteria. In all the specifications the percentage change in employment and capacity utilization perform poorly. Most of the coefficients are insignificant. This is consistent with both the Hansen (1990) and Moore (1988) studies, suggesting that although the commissioners state that these economic criteria are important, it is difficult to measure their importance. In contrast, in all the specifications the final dumping margin has

10. I also tested for the significance of the House oversight committee dummy. Results were virtually identical to the Senate dummy and are available on request.

11. I also ran other specifications to test for the importance of the other economic criteria (the level of capacity utilization and the concentration ratio), but they were not significant. Results are available on request.

a positive and significant effect on the outcome. This is a bit surprising since the simple cross-tabulation results (table 2.7) suggested that there should be little effect. Note further that the final dumping margin is the one key variable not known during most of the investigatory period. In model 8 the number of countries involved in the filing is included in the specification. It is negative but insignificant. A negative coefficient implies that, conditional on the case not being withdrawn, multiple petitions decrease the chance of protection. Model 9 estimates the steel industry's effect, while model 10 estimates the Senate oversight effect; neither are significant. In contrast with the Hansen (1990) and Moore (1988) studies, I do not find that the Senate oversight committee exerts influence on the ITC's final decision. This result, along with the results of models 4 and 5, suggests that political pressure is most significant at the first stage. This is consistent with Baldwin's (1985) conjecture that the ITC's structure insulates it from political pressure. Finally, in model 11 I find that the levels of capacity utilization, employment, and concentration ratio do not affect the outcome.

2.5 Concluding Comments and Interpretation of Results

In this paper I have argued that the history of U.S. antidumping usage requires we model the process as a two-stage problem. Given that approximately 25 percent of petitions are withdrawn (usually with some type of protection), a true understanding demands that we analyze the first-stage withdrawal decision. Because protection granted via a price/quota agreement appears to be so desirable, we must analyze whether the failure to arrange an agreement is a signal of the eventual ITC decision.

The key insight gained from the analysis in section 2.4 is that industry size and the number of petitions filed are the key determinants of the first-stage decision. Although the simple cross-tabulations (section 2.3) suggested that economic criteria influence the withdrawal decision, I found very little econometric evidence that the economic criteria influence the withdrawal decision. This suggests that the withdrawal decision is chiefly influenced by political pressure. Moreover, (1) the steel industry dummy, (2) number of countries involved in the petition, and (3) industry employment are all significant determinants of the withdrawal decision but are not significant determinants of the injury decision. This, too, is consistent with the political pressure hypothesis but runs counter to the self-selection hypothesis.

Furthermore, the analysis in section 2.4 also suggests that the economic criteria are not significant predictors of the injury decision. Although this result is a bit paradoxical, especially in light of the arguments and discussion found in the ITC's case reports, it is consistent with both Moore's (1988) and Hansen's (1990) findings, which suggests that it is difficult to measure the economic criteria (if any) that are truly related to injury. As discussed earlier, there are most likely other variables such as import market share, exports, and

inventory that are used by the ITC in determining injury. The unavailability of these variables precluded their inclusion in the analysis. Future analysis would surely benefit if these variables could be constructed. The unavailability of these variables also makes the results a bit more difficult to interpret. If these “missing” economic criteria are well proxied by the “known” economic criteria, then this result, that economic criteria have little predictive power, will not be altered by the inclusion of these additional economic variables. However, if the excluded variables are not related to the economic criteria already used, then this result may not be robust.

The fact that I find no congressional oversight influence on the injury decision is an important and interesting difference between this work and that of Moore (1988) and Hansen (1990). This is most likely due to the differences in the data sets—Moore’s analysis includes only a subset of all antidumping cases while Hansen’s analysis combines countervailing duty and escape clause actions with antidumping cases—which suggests that it is too early for any general insights about the influence of congressional oversight committees.

If cases are withdrawn because of political pressure rather than self-selection, then the welfare implications of such withdrawals are disturbing. Antidumping law was conceived as a protective measure to eliminate the potential threat of predatory pricing. However, it appears that industries of substantial size can strategically manipulate the law (by filing multiple petitions) to gain protection when none may be warranted. The requirement that injury must be shown can be circumvented if the potential political fall-out is significant.

This analysis, along with the earlier findings of Messerlin (1988, 1989) and Prusa (1988), suggests that the filing of an antidumping petition may often be as strategically motivated as it is economically motivated. Hopefully these findings will encourage others to further study the reasons for, and the effects of, such behavior.

Data Appendix

1. Basic case information such as the outcome, date of initiation, subject, country, and the number (and type) of petitioners was found in the *Fed-Track Guide to Antidumping Findings and Orders*. Products are identified by their seven-digit TSUSA code. TSUSA codes can be found in the *Federal Register* notices that accompany each petition. The four-digit SIC code corresponding to the TSUSA code can be found in *U.S. Foreign Trade Statistics, Schedule 6*. Gary Horlick also provided assistance in determining which withdrawn petitions involved officially sanctioned agreements.

2. Capacity utilization (practical rate) at the four-digit SIC level by year

was obtained from U.S. Bureau of the Census *Current Industrial Reports, Survey of Plant Capacity*.

3. Total employment at the four-digit SIC level by year was obtained from U.S. Bureau of the Census, *Census of Manufactures, Subject Series*.

4. Four-firm concentration ratios at the four-digit SIC level was obtained from U.S. Bureau of the Census, *Census of Manufactures, Industry Series*.

5. Congressional influence was measured by matching (four-digit SIC) industry location with congressional districts. Typically, each product (identified by SIC code) is produced in a number of regions in the country. If a product is produced in a district whose congressional representative (House of Representatives or Senate) is a member of the Trade Subcommittee of the House Ways and Means Committee or the International Trade Subcommittee of the Senate Finance Committee, then I considered there to be a potential political pressure from that congressman. The *Almanac of American Politics* was used to determine subcommittee membership. Data for industry location by district and year at the four-digit SIC level were obtained from the *Census of Manufactures, Geographic Area Series*. An industry had to employ at least a thousand people in a district to be considered as potentially exerting political influence.

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Comment Robert M. Stern

Let me begin by saying that I liked this paper very much. It is dealing with an especially important aspect of U.S. trade policies. Prusa sets up his analysis clearly, organizes the data well, and interprets his empirical results in a sensible manner.

Most of my remarks are designed to elaborate further some of the analytical and policy issues involved in antidumping (AD) actions, but I will also raise some questions about Prusa's modeling decisions, selection of variables, and interpretation of results.

In order to set Prusa's paper in context, it is worth noting that AD actions constitute by far the most intensively used of the available instruments of trade

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policy that are designed ostensibly to deal with “unfair” trade practices and import disruption. For example, according to Hoekman and Leidy,¹ there were 1,277 AD investigations initiated and 541 AD actions actually carried out during the period 1980–85. The chief countries/blocs involved were Australia (416; 138); Canada (230; 152), European Community (280; 122), Japan (1; 0) and the United States (350, 129). This compares to a total of 450 countervailing duty (CVD) actions initiated and 110 actually implemented, 23 escape clause actions implemented, and 120 voluntary export restraints (VERs) implemented during this same period.

These data provide some indication of the prevalence of AD actions in the major trading countries/blocs, and they also demonstrate as well the comparatively small use that is made of escape clause actions. It thus seems reasonably clear, as Hoekman and Leidy argue, that one can interpret the intensive use of AD actions as well as the related proliferation of VERs as an indication of the ineffectiveness of present arrangements governing the use of safeguards. This further implies that the resort to AD actions may have less to do with alleged dumping per se and more to do with market disruption more generally due to increased imports. If AD actions are observed to have important detrimental effects on resource allocation and welfare, the question then becomes one of how to reduce reliance on these and other measures such as VERs. This means finding ways to limit the resort to AD actions and/or to strengthen the use of safeguards agreements in the GATT.

Turning now to Prusa’s analytical discussion, he notes that, for his purpose, it is adequate to use a simple definition of dumping, which is based on selling abroad at a lower price than at home. While this may be acceptable in a broad sense, there may in fact be important administrative differences involved in AD cases that are based on price differences as compared to those in which selling below cost may be the basis for an allegation of dumping. In particular, there would appear to be much more administrative discretion involved in selecting cost criteria and then calculating dumping margins based on these criteria. What I am wondering therefore is if it might be possible to distinguish the AD actions initiated according to whether they are price or cost based, and if it makes a difference as to whether or not there will be a settlement.

Prusa notes that there are numerous “frivolous” AD actions initiated that are subsequently dismissed by the ITC. He chooses to exclude these actions from his analysis. There is a difficulty here, however, since the very existence of the AD legal mechanism and the filing of actions may affect the behavior of foreign and domestic firms in ways that correspond to the effects of AD actions that make their way farther through the administrative process. A more careful look at the characteristics of the so-called frivolous actions might therefore be worthwhile.

1. Bernard M. Hoekman and Michael P. Leidy, “Dumping, Antidumping, and Emergency Protection,” *Journal of World Trade* 23 (October 1989): 29.

Prusa puts forth two hypotheses—self-selection and political pressure—relating to the withdrawal of AD actions. He notes that multiple filings of AD complaints against several countries may be indicative of the exercise of political pressure. But there is a related interpretation of multiple filings, which involves the recognition by the complainants that it is in their interest to broaden their complaints as much as possible since it is known that more selective AD actions will work less effectively. Thus, the more countries that can be targeted in an AD filing, the greater the likelihood of success that the complainants may achieve in protecting their economic interests.

In selecting the economic variables to be included in his analysis, Prusa identifies especially changes in capacity utilization and changes in employment as indicators that are apparently used by the ITC. What he does not make clear, however, is whether these are the only important variables. For example, does the ITC pay attention to such matters as changes in industry or firm profitability, changes in sales, and the degree of import penetration? Are the variables that Prusa has chosen really the important ones? If so, do they serve as adequate proxies for other excluded variables? If not, is he missing some important variables? This latter question is pertinent since his empirical results suggest that economic factors are not of great importance in explaining ITC decisions.

In reporting his nested logit results for models 1–6 in Table 2.9, Prusa notes that the inclusion of the employment variable dominates the steel dummy. He then concludes that the results reflect industry size but not the special characteristics of the steel industry, which was a major AD complainant especially in 1982 and 1984. In view of the finding that the steel dummy is statistically significant by itself but not in combination with employment, isn't this suggestive of multicollinearity? And, if so, is it correct to say that the results do not reflect the unusual importance of the steel industry, which also happens to be a rather large industry in terms of employment?

The inclusion of the final dumping margin comes through as a statistically significant variable. Prusa does not have a ready answer as to why this is the case, since he mentions that the size of this margin is not precisely known until the final decision has been made. But isn't it possible that those involved have some notion of how large this margin might be in specific circumstances? The question, then, is that if the final dumping margin is found to be significant, is it acting as a proxy for some other determining variable?

A further question that I have about the results concerns whether it is possible to say anything about the goodness of fit of the nested logit model. In particular, can anything be said about how to interpret the residuals of the estimating equations? Along the lines discussed above in choosing variables, are there some important omitted variables that should have been taken into account?

It is interesting in conclusion to mention some implications of Prusa's paper that might be worth pursuing in further research. As noted above, the use of

AD actions is concentrated especially in Australia, Canada, the European Community, and the United States. It would be interesting in this light to consider whether Prusa could adapt his framework to investigate the determinants of AD complaints and actions in other political environments and to determine the similarities and differences as compared to U.S. experience. The same thing might apply in investigating the factors governing the use of AD and CVD actions and the relation of both types of actions to the introduction of VERs.

I interpret Prusa's main finding to be that AD actions are dominated primarily by political rather than strictly economic considerations. The data cited earlier suggest that AD actions have become increasingly prevalent because of the ineffectiveness of safeguards procedures. The issue, then, is that AD actions are being justified on grounds of alleged dumping, whereas the more fundamental problem is how domestic firms should respond to disruption from imports. In a setting in which there are structural changes in comparative advantage often combined with swings in real exchange rates, it is not surprising that domestic firms will find themselves under considerable pressure at given points in time. The challenge for policy thus ought to be the design and implementation of more effective safeguards measures and, at the same time, a movement to phase out AD measures or, as Hoekman and Leidy suggest,² to introduce more elements of safeguards into the AD measures.

2. *Ibid.*, 41–42.